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EXAMINER

YAGER, JAMES C

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment dated 19 May 2008 has been entered. Claims 1-4 are pending in the application.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Wycech (US 4,751,249).

Regarding claims 1-3, Wycech discloses a skeleton structural member (Fig 1., 10, 12) for use in a transport machine (C3/L45-50, Fig. 1, automobile), comprising: a hollow skeleton member; and multiple granules packed inside the skeleton member (C2/L25-40, plurality of pellets, Fig. 4) and/or a space bounded by the skeleton member and a panel member peripheral to the skeleton member; and wherein the multiple granules are contained in a closed space bounded at least in part by an expended partition wall member provided inside the skeleton member and/or space, ((C2/L25-40,

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matrix of expanded polystyrene, Fig. 4), wherein the expanded partition wall member is formed of a material that expands more quickly upon exposure to heat than the multiple granules expand (C2/L65-C3/L6, polystyrene expanded about the pellets, Fig. 4) and wherein the partition wall member is made of a foaming resin material (C2/L25-40, polystyrene) .

Regarding the method limitations recited in claim 2, the examiner notes that even though a product-by-process is defined by the process steps by which the product is made, determination of patentability is based on the product itself. In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). As the court stated in Thorpe, 777 F.2d at 697, 227 USPQ at 966 (The patentability of a product does not depend on its method of production. In re Pilkington, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969). If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wycech (US 4,751,249) in view of Bock et al. (2003/0057737).

Regarding claim 4, Wycech discloses a method for manufacturing a skeleton structural member to be used in a transport machine (C1/L7-20), said skeleton structural member having multiple granules packed inside a skeleton member and or a space bounded by a skeleton member and a panel member peripheral thereto, wherein the multiple granules are contained in a closed space bounded at least in part by an expanded partition wall member provided inside the skeleton member and/or space (C2/L25-40, plurality of pellets, Fig. 4), the manufacturing method comprising the steps of: disposing a plurality of partition wall forming members inside a vessel or a bag (C2/L64-C3/L5); placing the multiple granules between the plurality of partition wall forming members inside the vessel or the bag; disposing the vessel or the bag containing the granules inside the skeleton member and/or space (C6/55-60 loading insert into structural member comprising a shell or other frame member); and heating the skeleton member with the vessel or the bag containing the plurality of partition wall forming members and multiple granules disposed inside the skeleton member and/or

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space (C3/L63-66, Fig. 6). It is the examiner's position that the shell member could be considered a vessel disposed inside the structural member.

Wycech does not disclose disposing the partition wall forming members apart from each other.

Bock discloses a method of manufacturing a skeleton structural member to be used in a transport machine ([0009]), Fig. 5), the manufacturing method comprising the steps of: disposing a plurality of partition wall forming members for forming partition walls inside the skeleton member and/or space apart from each other inside a vessel or a bag ([0008], Fig. 4); disposing the vessel and its contents or the bag and its contents inside the skeleton member and/or space (Fig. 5); and heating the vessel and contents of the vessel or the bag and contents of the bag ([0031]). Bock further discloses that the partition walls are made of a foaming resin material ([0010]) and that the method increases the stiffness, strength, durability, sealing and sound absorption/dampening properties of the skeleton structural member ([0027]).

Wycech and Bock are analogous art because they both teach methods of manufacturing skeletal structural members for vehicles comprising disposing partition walls made of foaming resin materials. Therefore, it would have been obvious to one of ordinary skill in the art to use the step of disposing the partition wall forming members apart from each other as taught by Bock in the method of manufacturing a skeletal structural member of Wycech in order to provide a method of manufacturing a skeleton structural member that produces a skeleton structural member with increased stiffness, strength, durability, sealing and sound absorption/dampening properties.

### ***Response to Arguments***

7. Applicant's arguments filed 19 May 2008 have been fully considered but they are not persuasive. Applicant argues:

Wycech discloses a "precast" insert (see Abstract) that can be placed within a structural member for an automobile and heated. The insert 10 is formed in a mold cavity (see Figs. 2-4). Specifically, pellets 15 formed of a thermosetting polymeric resin and a blowing agent (see col. 4, lines 21-23) are placed into the mold cavity together with unexpanded polystyrene pellets 22 (see col. 5, lines 27-38). The unexpanded polystyrene pellets 22 fill the interstitial spaces between the pellets 15 and the walls of the mold cavity. Steam, heated air or gas is then injected into the mold to cause the polystyrene pellets 22 to expand, forming expanded polystyrene 22', which captures and retains the pellets 15, thereby forming the "precast" insert 10 (see col. 5, lines 42-53). Wycech teaches that the "precast" insert 10 can be placed inside a structural member 12 (see col. 6, lines 55-63). When the structural member 12 is heated, the "precast" insert disposed therein undergoes changes. Specifically, the expanded polystyrene 22' vaporizes and the pellets 15 expand and bond to themselves and to the inner walls of the structural member (see col. 7, lines 25-54).

The process disclosed in Wycech produces a structural member that is significantly different than claimed in claim 1. Claim 1, as amended, claims a skeleton structural member comprising a hollow skeleton member and multiple granules packed inside the skeleton member and/or a space bounded by the skeleton member and a panel member peripheral to the skeleton member, "wherein the multiple granules are contained in a closed space bounded at least in part by an expanded partition wall member provided inside the skeleton member and/or space" (underlined emphasis added). There is no expanded partition wall member in the structural member according to Wycech. The expanded polystyrene 22' in the "precast" insert according to Wycech degrades "to a thin film or soot" (see col. 7, lines 31-33) when the structural member is heated, leaving only the expanded pellets 15 behind. Thus the expanded pellets 15 in the structural member according to Wycech are not contained in a closed space bounded at least in part by an expanded partition wall member as required by claim 1. Applicant's skeleton structural member as claimed in claim 1 is clearly not anticipated by Wycech.

Also in the prior Office Action, the Examiner rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over Wycech in view of Bock et al. The Examiner contends that Wycech discloses a method for manufacturing a skeleton structural member as claimed, except that Wycech does not disclose disposing the partition wall forming members apart from each other. As noted above, this is in error. There are no partition wall members at all in the structural member according to Wycech. After heating, all that remains are expanded pellets.

Applicant's arguments are unpersuasive because the broadest definition of the term "wall" is a material layer that encloses a space. Since the expanded polystyrene of Wycech encloses the pellets (i.e. spaces), the expanded polystyrene can be considered an expanded partition wall member. Further, the fact that the process of Wycech ultimately results in vaporization of the polystyrene does not change the fact that at some point in the process of Wycech, a skeleton structural member with multiple granules contained in a closed space bounded by an expanded partition wall member exists and is disclosed.

8. Applicant's arguments filed 19 May 2008 have been fully considered but they are not persuasive. Applicant argues:

Bock et al. teaches that "segments" can be placed within structural members of automobiles to reinforce the structural members. Bock et al. teaches that each of the "segments" is "composed of a polymeric material such as nylon, an injection molded nylon carrier, an injection molded polymer, graphite, carbon or a molded metal" (see [0011]) that is at least partially coated with a bonding material that preferably comprises a heat-activated structural foam, which expands and cures upon heating (see [0031]). Neither Wycech nor Bock et al. fairly teaches a method for manufacturing a skeleton structural member that comprises the steps of disposing a vessel or a bag containing a plurality of spaced apart partition wall forming members and multiple granules inside the skeleton member and/or space and heating the skeleton member with the vessel or the bag containing the plurality of partition wall forming members and multiple granules disposed inside the skeleton member and/or space as claimed in claim 4. Accordingly, the rejection of claim 4 should be withdrawn.

Applicant's argument is unpersuasive. For more clarity, examiner directs applicant's attention to C6/55-60 of Wycech which discloses loading the insert into structural member comprising a shell or other frame member. It is the examiner's position that the shell can be considered a vessel disposed inside the structural member. Therefore, modified Wycech discloses a method comprising the steps of disposing a vessel containing a plurality of spaced apart partition wall members and



multiple granules inside the skeleton member and heating the skeleton member with the vessel containing the plurality of partition wall forming members and multiple granules disposed inside the skeleton member.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-3880. The examiner can normally be reached on Mon - Thurs, 7:30am-5pm, EST, Alt. Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 7/21/08

/Callie E. Shosho/  
Supervisory Patent Examiner, Art Unit 1794